

## **RAW SEQUENCE LISTING**

**The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.**

Application Serial Number: 10/564,429A  
Source: IFWP  
Date Processed by STIC: 6/21/06

# ***ENTERED***



IFWP

## RAW SEQUENCE LISTING

DATE: 06/21/2006

PATENT APPLICATION: US/10/564,429A

TIME: 11:01:37

Input Set : E:\SONN084US.ST25.txt

Output Set: N:\CRF4\06212006\J564429A.raw

3 <110> APPLICANT: Buschle, Michael  
 4 Frisch, Jurgen  
 5 Klade, Christoph  
 6 Lingnau, Karen  
 7 Zauner, Wolfgang  
 8 Zettlmeissl, Gerd

10 <120> TITLE OF INVENTION: HCV vaccines  
 12 <130> FILE REFERENCE: SONN:084US  
 14 <140> CURRENT APPLICATION NUMBER: 10/564,429A  
 15 <141> CURRENT FILING DATE: 2006-01-11  
 17 <150> PRIOR APPLICATION NUMBER: EP 03450171.8  
 18 <151> PRIOR FILING DATE: 2004-03-12  
 20 <150> PRIOR APPLICATION NUMBER: EP 04450062.7  
 21 <151> PRIOR FILING DATE: 2004-07-11  
 23 <150> PRIOR APPLICATION NUMBER: PCT/EP2004/007540  
 24 <151> PRIOR FILING DATE: 2004-07-09  
 26 <160> NUMBER OF SEQ ID NOS: 156  
 28 <170> SOFTWARE: PatentIn version 3.3  
 30 <210> SEQ ID NO: 1  
 31 <211> LENGTH: 15  
 32 <212> TYPE: PRT  
 33 <213> ORGANISM: HCV vaccines  
 35 <400> SEQUENCE: 1  
 37 Ala Ala Gln Gly Tyr Lys Val Leu Val Leu Asn Pro Ser Val Ala  
 38 1 5 10 15  
 41 <210> SEQ ID NO: 2  
 42 <211> LENGTH: 17  
 43 <212> TYPE: PRT  
 44 <213> ORGANISM: HCV vaccines  
 46 <400> SEQUENCE: 2  
 48 Ala Ala Gln Gly Tyr Lys Val Leu Val Leu Asn Pro Ser Val Ala Ala  
 49 1 5 10 15  
 52 Thr  
 56 <210> SEQ ID NO: 3  
 57 <211> LENGTH: 15  
 58 <212> TYPE: PRT  
 59 <213> ORGANISM: HCV vaccines  
 61 <400> SEQUENCE: 3  
 63 Ala Ala Trp Tyr Glu Leu Thr Pro Ala Glu Thr Thr Val Arg Leu  
 64 1 5 10 15  
 67 <210> SEQ ID NO: 4  
 68 <211> LENGTH: 16  
 69 <212> TYPE: PRT

## RAW SEQUENCE LISTING

DATE: 06/21/2006

PATENT APPLICATION: US/10/564,429A

TIME: 11:01:37

Input Set : E:\SONN084US.ST25.txt

Output Set: N:\CRF4\06212006\J564429A.raw

```

70 <213> ORGANISM: HCV vaccines
72 <400> SEQUENCE: 4
74 Ala Ala Trp Tyr Glu Leu Thr Pro Ala Glu Thr Thr Val Arg Leu Arg
75 1          5          10          15
78 <210> SEQ ID NO: 5
79 <211> LENGTH: 15
80 <212> TYPE: PRT
81 <213> ORGANISM: HCV vaccines
83 <400> SEQUENCE: 5
85 Ala Phe Cys Ser Ala Met Tyr Val Gly Asp Leu Cys Gly Ser Val
86 1          5          10          15
89 <210> SEQ ID NO: 6
90 <211> LENGTH: 15
91 <212> TYPE: PRT
92 <213> ORGANISM: HCV vaccines
94 <400> SEQUENCE: 6
96 Ala Gly Ala Ala Trp Tyr Glu Leu Thr Pro Ala Glu Thr Thr Val
97 1          5          10          15
100 <210> SEQ ID NO: 7
101 <211> LENGTH: 9
102 <212> TYPE: PRT
103 <213> ORGANISM: HCV vaccines
105 <400> SEQUENCE: 7
107 Ala Arg Leu Ile Val Phe Pro Asp Leu
108 1          5
111 <210> SEQ ID NO: 8
112 <211> LENGTH: 20
113 <212> TYPE: PRT
114 <213> ORGANISM: HCV vaccines
116 <400> SEQUENCE: 8
118 Ala Arg Leu Ile Val Phe Pro Asp Leu Gly Val Arg Val Cys Glu Lys
119 1          5          10          15
122 Met Ala Leu Tyr
123          20
126 <210> SEQ ID NO: 9
127 <211> LENGTH: 10
128 <212> TYPE: PRT
129 <213> ORGANISM: HCV vaccines
131 <400> SEQUENCE: 9
133 Ala Tyr Ala Ala Gln Gly Tyr Lys Val Leu
134 1          5          10
137 <210> SEQ ID NO: 10
138 <211> LENGTH: 13
139 <212> TYPE: PRT
140 <213> ORGANISM: HCV vaccines
142 <400> SEQUENCE: 10
144 Ala Tyr Ala Ala Gln Gly Tyr Lys Val Leu Ala Ala Thr
145 1          5          10
148 <210> SEQ ID NO: 11

```

## RAW SEQUENCE LISTING

DATE: 06/21/2006

PATENT APPLICATION: US/10/564,429A

TIME: 11:01:37

Input Set : E:\SONN084US.ST25.txt

Output Set: N:\CRF4\06212006\J564429A.raw

```

149 <211> LENGTH: 16
150 <212> TYPE: PRT
151 <213> ORGANISM: HCV vaccines
153 <400> SEQUENCE: 11
155 Ala Tyr Ala Ala Gln Gly Tyr Lys Val Leu Pro Ser Val Ala Ala Thr
156 1 5 10 15
159 <210> SEQ ID NO: 12
160 <211> LENGTH: 16
161 <212> TYPE: PRT
162 <213> ORGANISM: HCV vaccines
164 <400> SEQUENCE: 12
166 Ala Tyr Ala Ala Gln Gly Tyr Lys Val Leu Val Leu Asn Pro Ser Val
167 1 5 10 15
170 <210> SEQ ID NO: 13
171 <211> LENGTH: 18
172 <212> TYPE: PRT
173 <213> ORGANISM: HCV vaccines
175 <400> SEQUENCE: 13
177 Ala Tyr Ala Ala Gln Gly Tyr Lys Val Leu Val Leu Asn Pro Ser Val
178 1 5 10 15
181 Ala Ala
185 <210> SEQ ID NO: 14
186 <211> LENGTH: 19
187 <212> TYPE: PRT
188 <213> ORGANISM: HCV vaccines
190 <400> SEQUENCE: 14
192 Ala Tyr Ala Ala Gln Gly Tyr Lys Val Leu Val Leu Asn Pro Ser Val
193 1 5 10 15
196 Ala Ala Thr
200 <210> SEQ ID NO: 15
201 <211> LENGTH: 9
202 <212> TYPE: PRT
203 <213> ORGANISM: HCV vaccines
205 <400> SEQUENCE: 15
207 Ala Tyr Ser Gln Gln Thr Arg Gly Leu
208 1 5
211 <210> SEQ ID NO: 16
212 <211> LENGTH: 10
213 <212> TYPE: PRT
214 <213> ORGANISM: HCV vaccines
216 <400> SEQUENCE: 16
218 Ala Tyr Ser Gln Gln Thr Arg Gly Leu Leu
219 1 5 10
222 <210> SEQ ID NO: 17
223 <211> LENGTH: 9
224 <212> TYPE: PRT
225 <213> ORGANISM: HCV vaccines
227 <400> SEQUENCE: 17
229 Cys Ile Asn Gly Val Cys Trp Thr Val

```

## RAW SEQUENCE LISTING

DATE: 06/21/2006

PATENT APPLICATION: US/10/564,429A

TIME: 11:01:37

Input Set : E:\SONN084US.ST25.txt

Output Set: N:\CRF4\06212006\J564429A.raw

```

230 1          5
233 <210> SEQ ID NO: 18
234 <211> LENGTH: 15
235 <212> TYPE: PRT
236 <213> ORGANISM: HCV vaccines
238 <400> SEQUENCE: 18
240 Asp Ile Leu Ala Gly Tyr Gly Ala Gly Val Ala Gly Ala Leu Val
241 1          5          10          15
244 <210> SEQ ID NO: 19
245 <211> LENGTH: 9
246 <212> TYPE: PRT
247 <213> ORGANISM: HCV vaccines
249 <400> SEQUENCE: 19
251 Asp Leu Met Gly Tyr Ile Pro Ala Val
252 1          5
255 <210> SEQ ID NO: 20
256 <211> LENGTH: 9
257 <212> TYPE: PRT
258 <213> ORGANISM: HCV vaccines
260 <400> SEQUENCE: 20
262 Asp Leu Met Gly Tyr Ile Pro Leu Val
263 1          5
266 <210> SEQ ID NO: 21
267 <211> LENGTH: 10
268 <212> TYPE: PRT
269 <213> ORGANISM: HCV vaccines
271 <400> SEQUENCE: 21
273 Asp Leu Met Gly Tyr Ile Pro Ala Val Gly
274 1          5          10
277 <210> SEQ ID NO: 22
278 <211> LENGTH: 10
279 <212> TYPE: PRT
280 <213> ORGANISM: HCV vaccines
282 <400> SEQUENCE: 22
284 Asp Leu Met Gly Tyr Ile Pro Leu Val Gly
285 1          5          10
288 <210> SEQ ID NO: 23
289 <211> LENGTH: 12
290 <212> TYPE: PRT
291 <213> ORGANISM: HCV vaccines
293 <400> SEQUENCE: 23
295 Asp Leu Met Gly Tyr Ile Pro Ala Val Gly Ala Pro
296 1          5          10
299 <210> SEQ ID NO: 24
300 <211> LENGTH: 12
301 <212> TYPE: PRT
302 <213> ORGANISM: HCV vaccines
304 <400> SEQUENCE: 24
306 Asp Leu Met Gly Tyr Ile Pro Leu Val Gly Ala Pro

```

## RAW SEQUENCE LISTING

DATE: 06/21/2006

PATENT APPLICATION: US/10/564,429A

TIME: 11:01:37

Input Set : E:\SONN084US.ST25.txt

Output Set: N:\CRF4\06212006\J564429A.raw

```

307 1          5          10
310 <210> SEQ ID NO: 25
311 <211> LENGTH: 13
312 <212> TYPE: PRT
313 <213> ORGANISM: HCV vaccines
315 <400> SEQUENCE: 25
317 Asp Leu Met Gly Tyr Ile Pro Ala Val Gly Ala Pro Leu
318 1          5          10
321 <210> SEQ ID NO: 26
322 <211> LENGTH: 13
323 <212> TYPE: PRT
324 <213> ORGANISM: HCV vaccines
326 <400> SEQUENCE: 26
328 Asp Leu Met Gly Tyr Ile Pro Leu Val Gly Ala Pro Leu
329 1          5          10
332 <210> SEQ ID NO: 27
333 <211> LENGTH: 14
334 <212> TYPE: PRT
335 <213> ORGANISM: HCV vaccines
337 <400> SEQUENCE: 27
339 Asp Leu Met Gly Tyr Ile Pro Ala Leu Val Gly Ala Pro Leu
340 1          5          10
343 <210> SEQ ID NO: 28
344 <211> LENGTH: 9
345 <212> TYPE: PRT
346 <213> ORGANISM: HCV vaccines
348 <400> SEQUENCE: 28
350 Asp Leu Met Gly Tyr Ile Pro Ala Val
351 1          5
354 <210> SEQ ID NO: 29
355 <211> LENGTH: 9
356 <212> TYPE: PRT
357 <213> ORGANISM: HCV vaccines
359 <400> SEQUENCE: 29
361 Asp Leu Met Gly Tyr Ile Pro Leu Val
362 1          5
365 <210> SEQ ID NO: 30
366 <211> LENGTH: 11
367 <212> TYPE: PRT
368 <213> ORGANISM: HCV vaccines
370 <400> SEQUENCE: 30
372 Asp Leu Met Gly Tyr Ile Pro Leu Val Gly Ala
373 1          5          10
376 <210> SEQ ID NO: 31
377 <211> LENGTH: 13
378 <212> TYPE: PRT
379 <213> ORGANISM: HCV vaccines
381 <400> SEQUENCE: 31
383 Asp Leu Met Gly Tyr Ile Pro Leu Val Gly Ala Pro Leu

```

RAW SEQUENCE LISTING ERROR SUMMARY      DATE: 06/21/2006  
PATENT APPLICATION: US/10/564,429A      TIME: 11:01:38

Input Set : E:\SONN084US.ST25.txt  
Output Set: N:\CRF4\06212006\J564429A.raw

**Please Note:**

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:152; Xaa Pos. 1,2,3,4,5,6,7,8,9  
Seq#:153; Xaa Pos. 1,2,3,4,5,6,7,8,9,10  
Seq#:154; Xaa Pos. 1,2,3,4,5,6,7,8,9,10,11  
Seq#:155; Xaa Pos. 1,2,3,4,5,6,7,8,9,10,11,12  
Seq#:156; Xaa Pos. 1,2,3,4,5,6,7,8,9,10,11,12,13

**Invalid <213> Response:**

Use of "Artificial" only as "<213> Organism" response is incomplete,  
per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

Seq#:152,153,154,155,156

**VERIFICATION SUMMARY**

DATE: 06/21/2006

PATENT APPLICATION: US/10/564,429A

TIME: 11:01:38

Input Set : E:\SONN084US.ST25.txt

Output Set: N:\CRF4\06212006\J564429A.raw

L:1929 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:152 after pos.:0  
L:1979 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:153 after pos.:0  
L:2029 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:154 after pos.:0  
L:2079 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:155 after pos.:0  
L:2129 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:156 after pos.:0